



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,961	01/18/2000	Mark C. Nowell	2386.1014001	1330

21005 7590 07/11/2005

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

DUONG, FRANK

ART UNIT PAPER NUMBER

2666

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,961

Applicant(s)

NOWELL ET AL.

Examiner

Frank Duong

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is a response to communications dated 04/25/05. Claims 1-52 are pending in the application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-52 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support for the limitations of "having an aggregated data rate equivalent to the data rate of the SONET/SDH frames" and "transmitted at an aggregated data rate equivalent to the data rate of the SONET/SDH frames", as recited in claims 1-29, 38-52 and 29-37, respectively, in the original specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2666

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimoto et al (Skew-Free Parallel Optical Transmission Systems, IEEE, pages 1822-1831, October 1998) (hereinafter "Fujimoto").

Regarding **claim 1**, in accordance Fujimoto reference entirety, Fujimoto discloses a system (Figures 2, 5, 10 and 11) for transferring synchronous optical network/synchronous digital hierarchy (SONET/SDH) frames (156 Mb/s) (*see page 1822, right column, Fujimoto discloses basic bit rate of SDH is 156 Mb/s*) between a first and second node (*Figure 2 or 5; TX and RX or Transmitter Module and Receiver Module and Figures 10-11; Coder LSI and Decoder LSI*) comprising:

a demultiplexer (*page 1827, Figure 10; P/S*) to map SONET/SDH frames (156 Mb/s) onto a plurality of data channels (Ch1-Ch5) (*see Figures 10 and 11 and the corresponding description*);

an encoder (*page 1827, Figure 10*) to encode and translate data onto each data channel for transmission (*Coder LSI*);

a decoder (*page 1827, Figure 11*) to decode and translate data on each data channel for reception (*Decoder LSI*); and

a multiplexer (*page 1827, Figure 10; S/P*) to map the plurality of data channels (Ch1-Ch5) onto SONET/SDH frames (156 Mb/s) (*see Figures 10 and 11 and the corresponding description*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Fujimoto further discloses wherein the multiplexer includes a framer

(*Figure 10; F/C INS*) to determine the position of frame markers in the data (see page 1826, left column, section A).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Fujimoto further discloses wherein the first and second nodes communicate over parallel transmission links (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 4**, in addition to features recited in base claim 2 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission links comprise a parallel-optics based transmission link (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 5**, in addition to features recited in base claim 3 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission link comprise a wavelength division multiplex (WDM) based transmission link (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 6**, in accordance Fujimoto reference entirety, Fujimoto discloses a method (*Figures 2, 5, 10 and 11*) for transferring synchronous optical network/synchronous digital hierarchy (SONET/SDH) frames between a first and second node *Figure 2 or 5; TX and RX or Transmitter Module and Receiver Module and Figures 10-11; Coder LSI and Decoder LSI*) comprising:

mapping (Figure 10) the SONET/SDH frames (156 Mb/s) onto a plurality of data channels (Ch1-Ch5) (see Figure 10 and description on page 1826, left column, section A pertaining Figure 10); and

transferring (Figure 10) the SONET/SDH frames (156 Mb/s) over a plurality of parallel transmission links (Ch1-Ch5) (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link) (see Figure 10 and description on page 1826, left column, section A pertaining Figure 10)

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Fujimoto further discloses wherein transferring the SONET/SDH frames (156 Mb/s) over parallel transmission links includes transmitting (TX Module or Coder LSI) and receiving (RX Module or Decoder LSI) the SONET/SDH frames over parallel transmission links (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 8**, in addition to features recited in base claim 7 (see rationales discussed above), Fujimoto further discloses byte stripping of the SONET/SDH frames onto parallel data channels (see Figure 10 and the description pertaining SWAP circuit disclosed on page 1826, left column).

Regarding **claim 9**, in addition to features recited in base claim 7 (see rationales discussed above), Fujimoto further discloses encoding each data channel for data formatting (see Figure 10).

Regarding **claim 10**, in addition to features recited in base claim 7 (see rationales discussed above), Fujimoto further discloses framing each data channel (see Figure 10; element F/C INS).

Regarding **claims 11-12**, in addition to features recited in base claim 6 (see rationales discussed above), Fujimoto further discloses wherein the parallel

Art Unit: 2666

transmission link comprises a 12 fiber (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 13**, in addition to features recited in base claim 6 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission link comprises a wavelength division multiplex (WDM) based transmission link (see Figure 5; ribbon fiber or Figures 10-11; parallel optical link).

Regarding **claim 14**, in addition to features recited in base claim 6 (see rationales discussed above), Fujimoto further discloses wherein the rate of SONET/SDH frames corresponds to an OC-192/STM-64 line rate (*see page 1830, right column; CONCLUSION, Fujimoto discloses the proposed multiplexing-based line code mB1A and non-multiplexing-based line code are for future Gbit/s interconnection. Thus, it is inherent that OC-192/STM-64 line rate is included in the recited statement*).

Regarding **claim 15**, in addition to features recited in base claim 7 (see rationales discussed above), Fujimoto further discloses wherein receiving SONET/SDH frames further comprises, receiving (Figure 11) data from each of the parallel transmission links (Ch1-Ch5); decoding each data channel (*Figure 11*); realigning each data channel to compensate for an inter-channel skew (Figure 11; element SSC); and recombining (S/P) the data channels into a SONET/SDH frame (156 Mb/s).

Regarding **claim 16**, in accordance Fujimoto reference entirety, Fujimoto discloses a method (*Figures 2, 5 and 10-11*) for transferring synchronous optical network (SONET)/synchronous digital hierarchy (SDH) frames (*see page 1822, right*

Art Unit: 2666

column, Fujimoto discloses basic bit rate of SDH is 156 Mb/s) over a parallel transmission system (Figure 5; Fiber Ribbon) comprising:

mapping (Figure 10; P/S) SONET/SDH frames (156 Mb/s) onto data channels (Ch1-Ch5); and

transmitting (F/C INS output) the SONET/SDH frames over a plurality of parallel transmission links (Ch1-Ch5).

Regarding **claim 17**, in accordance Fujimoto reference entirety, Fujimoto discloses a method (Figures 2, 5 and 10-11) of transmitting SONET/SDH frames (see page 1822, right column, *Fujimoto discloses basic bit rate of SDH is 156 Mb/s*) having framer markers (F/C INS), the method comprising:

determining the position of the frame markers (see page 1826, left column; F/C INS);

byte stripping of the SONET/SDH frames (P/S) onto a plurality of parallel of data channels (Ch1-Ch5) (see page 1826, left column);

encoding (Figure 10) each data channel (see page 1826, left column); and

transmitting (F/C INS output) the channels over parallel transmission links (Ch1-CH5).

Regarding **claims 18-19**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission link comprises a 12 fiber (Figure 5; Fiber Ribbon).

Regarding **claim 20**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein the parallel

Art Unit: 2666

transmission links comprises a wavelength division multiplex (WDM) based transmission link (*Figure 5; Fiber Ribbon*).

Regarding **claim 21**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein the rate of SONET/SDH frames corresponds to an OC-192/STM-64 line rate (*see page 1830, right column; CONCLUSION, Fujimoto discloses the proposed multiplexing-based line code mB1A and non-multiplexing-based line code are for future Gbit/s interconnection. Thus, it is inherent that OC-192/STM-64 line rate is included in the recited statement*).

Regarding **claim 22**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein frame delimiting is performed by overwriting at least a SONET byte on each data channel (*see page 4, second paragraph, "some SONET framing bytes on each data channel are overwritten with a frame delimiter"*).

Regarding **claim 23**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein at least a first three SONET framing bytes are overwritten on each data channel (*see page 1826, left column pertaining F/C INS*).

Regarding **claim 24**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein unique frame delimiters are used on a subset of the data channels (*see page 1826, left column pertaining F/C INS*).

Regarding **claim 25**, in addition to features recited in base claim 24 (see rationales discussed above), Fujimoto further discloses wherein a first, frame delimiter is used for a first half of the data channel and a second frame delimiter is used for a second half of the data channels (see page 1826, left column pertaining F/C INS).

Regarding **claim 26**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein each channel is encoded using a block-code (Figure 10).

Regarding **claim 27**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein the data channels are logically combined in such a manner to enable recovery of a single data channel and the logically combined channel exists as a separate data channel (see *Figure 11; S/P*).

Regarding **claim 28**, in addition to features recited in base claim 17 (see rationales discussed above), Fujimoto further discloses wherein a further data channel carries cyclic redundancy check (CRC) bits for the plurality of data channels (see *page 1827, left column pertaining SCR circuit*).

Regarding **claim 29**, in accordance Fujimoto reference entirety, Fujimoto discloses a method (*Figure 11 and description on page 1826, left column*) of receiving SONET/SDH frames (156 Mb/s) over a parallel transmission system (*Figure 11*) comprising:

- recovering (SDCR) data from each transmission link (Ch1-Ch5);
- decoding (*Figure 11*) each data channel (*Ch1-Ch5*);

realigning (SSC) each data channel to compensate for an inter-channel skew (;
and

recombining (S/P) the data channels (Ch1-Ch5) into a SONET/SDH frame (156
Mb/s).

Regarding **claims 30-31**, in addition to features recited in base claim 29 (see
rationales discussed above), Fujimoto further discloses wherein the parallel
transmission link comprises a 12 fiber (Figure 5; ribbon fiber).

Regarding **claim 32**, in addition to features recited in base claim 29 (see
rationales discussed above), Fujimoto further discloses wherein the parallel
transmission links comprises a wavelength division multiplex (WDM) based
transmission link (Figure 5; ribbon fiber).

Regarding **claim 33**, in addition to features recited in base claim 29 (see
rationales discussed above), Fujimoto further discloses wherein the rate of
SONET/SDH frames corresponds to an OC-192/STM-64 line rate (*see page 1830, right
column; CONCLUSION, Fujimoto discloses the proposed multiplexing-based line code
mB1A and non-multiplexing-based line code are for future Gbit/s interconnection. Thus,
it is inherent that OC-192/STM-64 line rate is included in the recited statement*).

Regarding **claim 34**, in addition to features recited in base claim 29 (see
rationales discussed above), Fujimoto further discloses wherein the receiver detects a
polarity of the transmission links by use of unique frame delimiters on subset of the data
channels (*see page 1826, left column pertaining the SSC circuit*).

Regarding **claim 35**, in addition to features recited in base claim 30 (see rationales discussed above), Fujimoto further discloses a loss of synchronization condition on a channel if a plurality of code word violation occurs (see *page 1826, right column pertaining Parallel Reframing system*).

Regarding **claim 36**, in addition to features recited in base claim 29 (see rationales discussed above), Fujimoto further discloses wherein a channel failure is detected using the loss of synchronization condition (see *page 1826, right column pertaining Parallel Reframing system*).

Regarding **claim 37**, in addition to features recited in base claim 29 (see rationales discussed above), Fujimoto further discloses detecting and correcting errors on the data channels by calculating a cyclic redundancy check for a block of data on the data channel; comparing it to a corresponding, separately-transmitted CRC for the block; and recovering the data from a protection channel if the CRC's do not match (see *page 1826, right column pertaining Parallel Reframing system*).

Regarding **claim 38**, in accordance Fujimoto reference entirety, Fujimoto discloses a transceiver module (*Figures 2, 5 and 10-11*) for transferring SONET/SDH frames (*156 Mb/s*) between a first and second node (TX Module and Rx Module), comprising:

a converter circuit (*Figure 15; Coder*) to adapt incoming signals (*156 Mb/s*) for transmission of parallel (*fiber ribbon*);

a parallel transmit optic module (*LD/CPL*) to transmit data channels (*Ch1-Ch5*);
and

a parallel receive optic module (*PD/CPL*) to receive data channels (*Ch1-Ch5*).

Regarding **claim 39**, in addition to features recited in base claim 38 (see rationales discussed above), Fujimoto further discloses wherein a rate for transferring SONET/SDH frames corresponds to an OC-192/STM-64 line rate (*see page 1830, right column; CONCLUSION, Fujimoto discloses the proposed multiplexing-based line code mB1A and non-multiplexing-based line code are for future Gbit/s interconnection. Thus, it is inherent that OC-192/STM-64 line rate is included in the recited statement*).

Regarding **claim 40**, in addition to features recited in base claim 38 (see rationales discussed above), Fujimoto further discloses wherein the first and second node communicate over parallel transmission links (*Fiber Ribbon*).

Regarding **claim 41**, in addition to features recited in base claim 40 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission links (*Fiber Ribbon*) comprises a parallel-optics based transmission link (*Fiber Ribbon*).

Regarding **claim 42**, in addition to features recited in base claim 40 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmission links comprises a wavelength division multiplex (WDM) based transmission link (*Fiber Ribbon*).

Regarding **claim 43**, in addition to features recited in base claim 38 (see rationales discussed above), Fujimoto further discloses wherein the converter circuit interfaces with a frame chip (*see Figure 5; Transmitter Module*).

Regarding **claim 44**, in addition to features recited in base claim 38 (see rationales discussed above), Fujimoto further discloses wherein the parallel transmit optic module is integral with the parallel receive optic module (see *Figure 5*).

Regarding **claim 45**, in addition to feature recited in base claim 2 (see rationales discussed above), Fujimoto further discloses wherein the encoder overwrites the frame markers on each channel with unique frame markers used for automatic skew compensation (see *Fig. 8 and the corresponding description on page 1825 or page 1826, right column, discussed about F frame bit insertion for skew suppression*).

Regarding **claim 46**, in addition to feature recited in base claim 45 (see rationales discussed above), Fujimoto further discloses wherein the unique frame markers are different for each channel (see *Fig. 6 on page 1825 depicted frame bits (F1-Fn+1) for channels 1-N+1*).

Regarding **claim 47**, in addition to feature recited in base claim 46 (see rationales discussed above), Fujimoto inherently discloses a ribbon patch cord with multiple optical fibers because Fig. 5 shows the configuration of a parallel optical links having 6-ch single-mode ribbon fiber.

Regarding **claim 48**, in addition to feature recited in base claim 47 (see rationales discussed above), Fujimoto further discloses an aligner (not shown; inherent) that re-orders the channels based on the unique frame markers to compensate for a crossover of optical fibers in the ribbon patch cord (see *page 1825, right column, last paragraph, Fujimoto discloses an automatic skew suppression based on bit synchronization and frame synchronization*).

Regarding **claim 49**, in addition to feature recited in base claim 47 (see rationales discussed above), Fujimoto further discloses an aligner (not shown; inherent) that re-orders on the channels as a function of the unique frame markers (see *page 1825, right column, last paragraph, Fujimoto discloses an automatic skew suppression based on bit synchronization and frame synchronization*).

Regarding **claim 50**, in addition to feature recited in base claim 2 (see rationales discussed above), Fujimoto further discloses an aligner (not shown; inherent) that deskews individual channels by using frame markers as delimiters to compensate for inter-channel skew that occurs due to propagation delay differences between or among the channel (see *page 1825, right column, last paragraph, Fujimoto discloses an optical deskewer methods and leans toward skew suppression to meet the requirements stated in Section 11*).

Regarding **claim 51**, in addition to features recited in base claim 1 (see rationales discussed above), Fujimoto further discloses wherein the data channels are logically combined in such a manner to enable recovery of a single data channel and the logically combined channel exists as a separate data channel (see *Figure 11; S/P*).

Regarding **claim 52**, in addition to features recited in base claim 1 (see rationales discussed above), Fujimoto further discloses wherein a further data channel carries cyclic redundancy check (CRC) bits for the plurality of data channels (see *page 1827, left column pertaining SCR circuit*).

Response to Arguments

4. Applicant's arguments filed 04/25/05 have been fully considered but they are not persuasive. Applicants' arguments will be addressed hereinbelow in the order in which they appear in the response filed 04/25/05.

In the Remarks of the outstanding response, on page 9, pertaining the rejection under 35 U.S.C. 112, first paragraph of claims 1-52 Applicants argue support for the limitation of "*a demultiplexer to map SONET/SDH frames onto a plurality of data channels having an aggregate data rate equivalent to the data rate of the SONET/SDH frames*", added in the amendment filed 08/02/04, can be found in the specification as originally filed at least at page 7, lines 20-23 and page 12, lines 8-10. To support the argument Applicants allege "page 12, lines 8-10, the specification states, "[I]f a frame pulse is present, the first three SONET A1 bytes on each channels are *overwritten* with codewords that form a frame delimiter." By overwriting the framing bytes, which include the A1 bytes, the aggregate data rate of the data channels onto which the demultiplexer maps the SONET/SDH frames is equivalent to the data rate of the SONET/SDH frames". Therefore, Applicants ... is proper".

In response Examiner respectfully disagrees and asserts the added limitation in the amendment filed 08/02/04 fails to satisfy the written requirement of 35 U.S.C. 112, first paragraph. The context of 35 U.S.C. 112, first paragraph clearly states "*The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly*

Art Unit: 2666

connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention". Contradistinction to the Applicants' argument, at page 12, lines 8-10, the specification states, "if a frame pulse is present, the first three SONET A1 bytes on each channels are overwritten with codewords that form a frame delimiter". From the disclosed features, the claimed limitation of "*a demultiplexer to map SONET/SDH frames onto a plurality of data channels having an aggregate data rate equivalent to the data rate of the SONET/SDH frames*", as recited in claims 1-52, cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Pertaining the rejection of claims 1-52 under 35 U.S.C. 102(b) as being anticipated by Fujimoto, Applicants argue the applied art of Fujimoto fails to teach the claimed limitation of "*data channels having an aggregate data rate equivalent to the data rate of the SONET/SDH frames*".

In response Examiner respectfully disagrees and asserts the Office Action has clearly pointed out the claimed limitation against that taught by Fujimoto as well as Examiner's position in reading the applied art of Fujimoto.

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments. Due to the response fails to place the application in a favorable condition for allowance and the arguments are not persuasive, the rejection is maintained.

Conclusion

5. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2666

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Frank Duong', with a stylized flourish at the end.

FRANK DUONG
PRIMARY EXAMINER

June 28, 2005